

CONDUCTIVE-CARBON NANOTUBE(CNT)-BIOSENSOR USING CONDUCTIVE CNT DOTTED WITH METALS OR CONDUCTIVE CNT DOTTED WITH METALS WHERE BIORECEPTOR IS COMBINED AND PREPARATION METHOD THEREOF

Publication number: KR20040107225 (A)

Also published as:

Publication date: 2004-12-20

DE102004027865 (A1)

Inventor(s): JUNG DAE HWAN; JUNG HUI TAE; KIM BYEONG HUN; KIM DO HYEON; KO YEONG GWAN; LEE JAE SIN; LEE SANG YEOP; LEE SEOK JAE

DE102004027865 (B4)

Applicant(s): KOREA INST SCIENCE TECHNOLOGY

Classification:

- international: C12Q1/00; C01B31/02; G01N33/551; C12Q1/00;
C01B31/00; G01N33/551; (IPC1-7): C12Q1/00

- European: C01B31/02B; G01N33/551; Y01N6/00

Application number: KR20030038232 20030613

Priority number(s): KR20030038232 20030613

Abstract of KR 20040107225 (A)

PURPOSE: A conductive carbon nanotube(CNT)-biosensor by using a conductive CNT dotted with metals or a conductive CNT dotted with metals where bioreceptor is combined and a preparation method thereof are provided. The biosensor has large surface area, improved conductivity to increase the amount of immobilized biological molecules, and improved accuracy with a small amount of a sample.; CONSTITUTION: The conductive-carbon nanotube(CNT) biosensor has a bioreceptor which binds to or reacts with a target bio-material in metals scattering on the conductive CNT or a pattern of the conductive CNT, wherein the bioreceptor is enzyme substrate, ligand, amino acid, peptide, protein, nucleic acid, lipid, cofactor or carbohydrate; and the conductive CNT dotted with metals has a form of CNT-(CONH-R1-S-M)r in which M is metal, r is an integer of 1 or over, and R1 is C1-20 carbohydrate, unsaturated carbohydrate or aromatic organic group. The method for preparing the conductive CNT-biosensor comprises binding a conductive CNT-M-nucleic acid complex to a substrate with amine/lysine group on its surface through UV radiation.

Data supplied from the **esp@cenet** database — Worldwide